Typical Calibration Sequence

RunControl Initiates Calibration Run:
- Starts Front End Crates
- Launches Calibration Consumer(s)

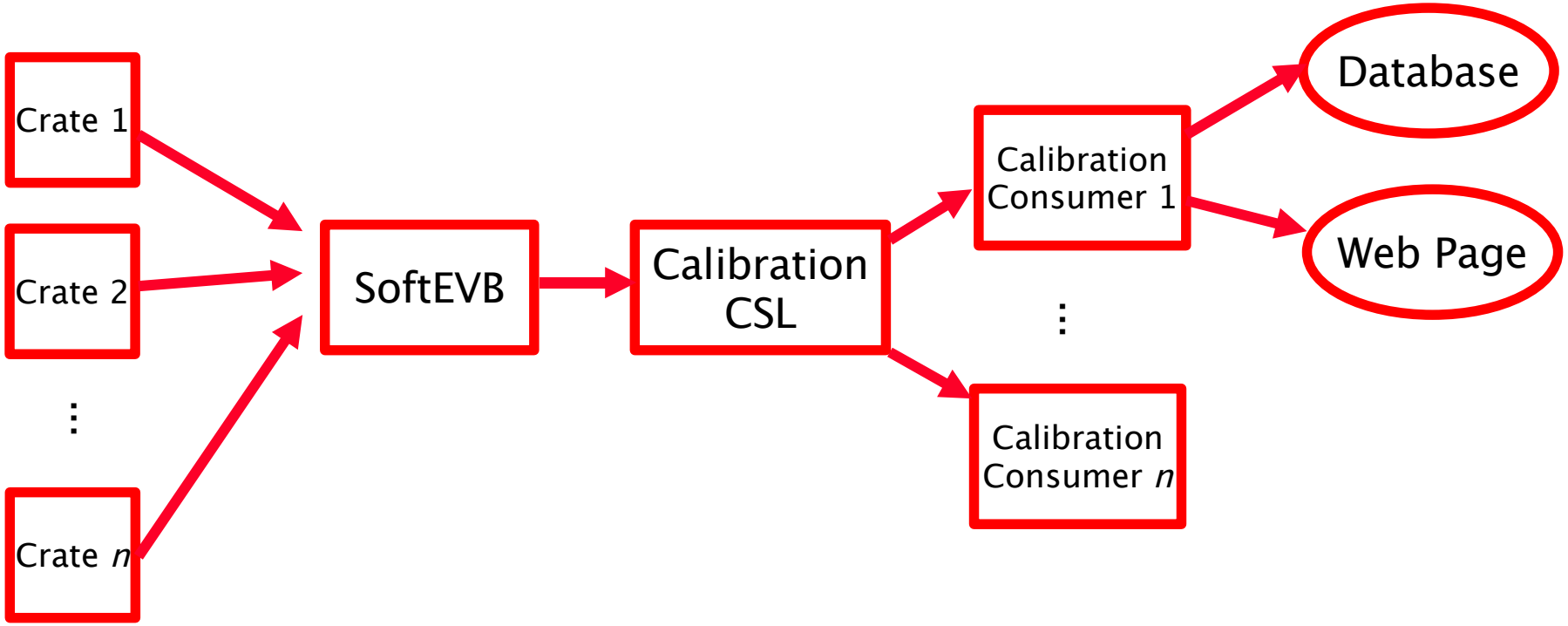
Front End Crate Runs Local Calibration Procedure
- Fires charge injectors at various settings (e.g. QIE calibrations)
- Reads ADC output
- Computes gains, offsets, RMS's for local channels
- Forwards summary “C Banks” (minibank format) to Software EVB

Software EVB
- Collates all crates' “C Banks” into one bank, send to Calib CSL

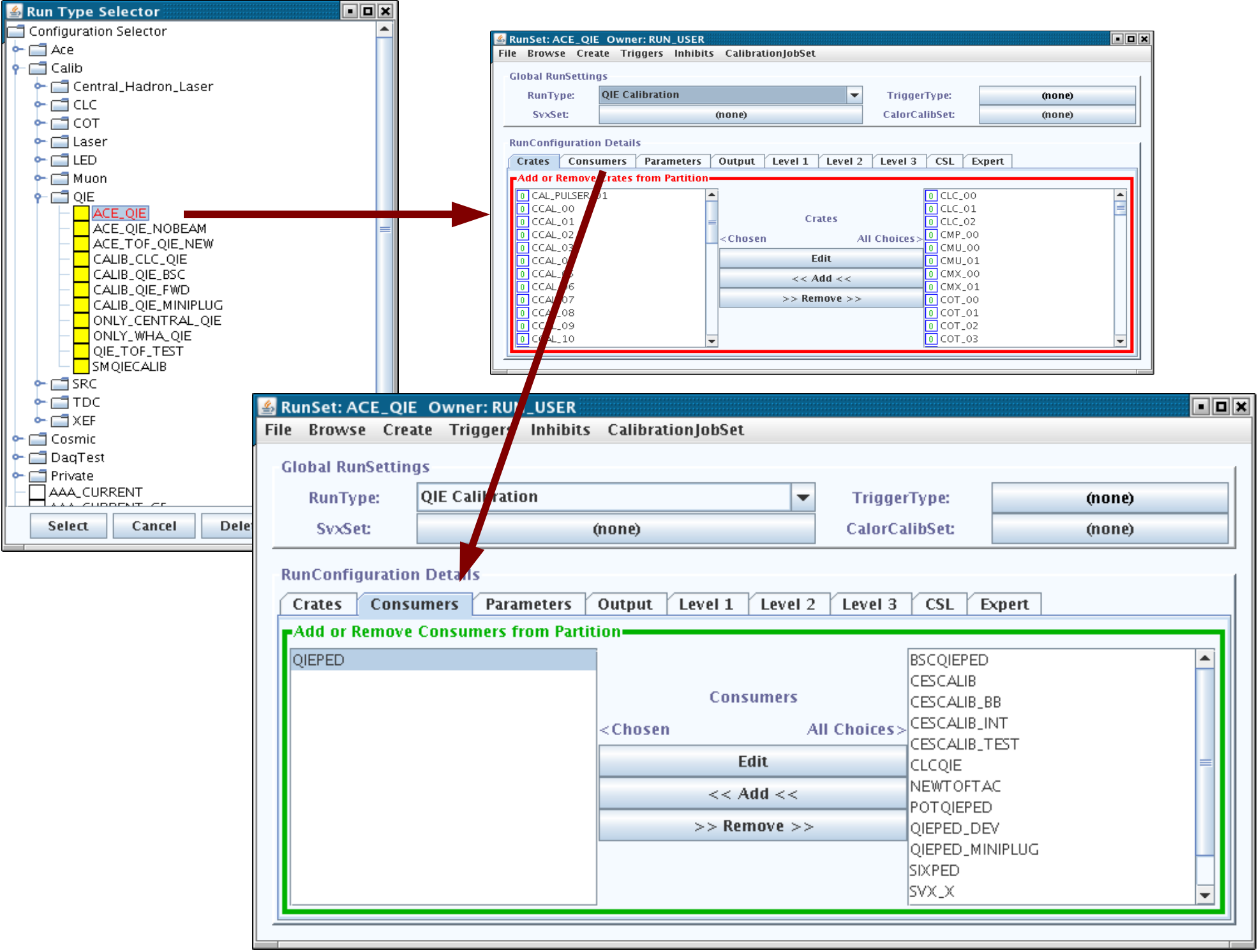
Calibration CSL *recently has given trouble – try restart, see Ace Web pages*
- Sends summary banks to all requesting consumers
- Runs in “VIP Mode” guarantees deliver of all events (unlike physics CSL)

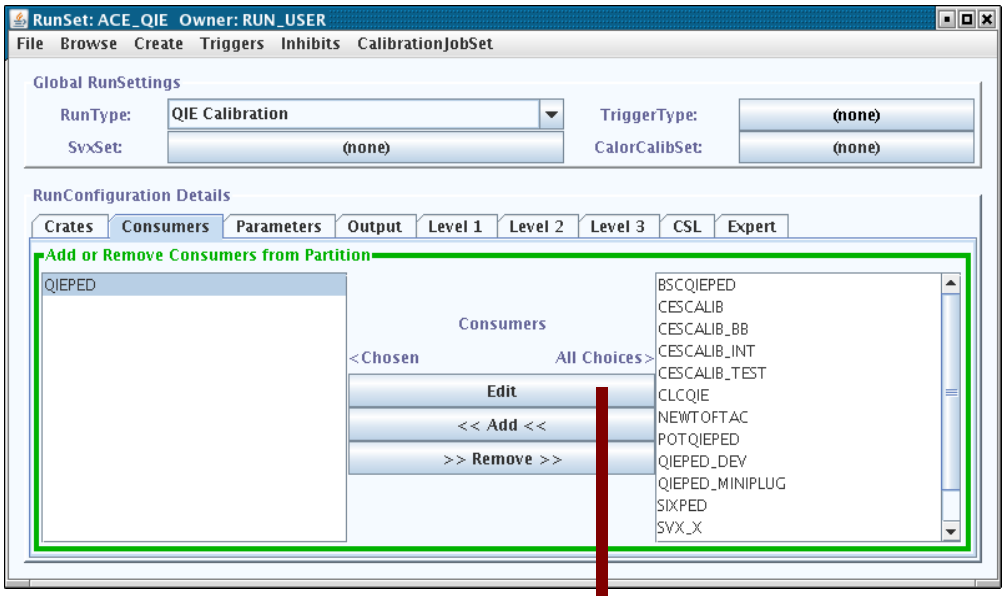
Calibration Consumers
- Previously launched by RunControl, AC++ modules
- Receives “C Banks” from Calibration CSL
- Do high level analysis and write results into Calibration Database
- Upon completion, spawn DBana script to make plots and post entry in eLog

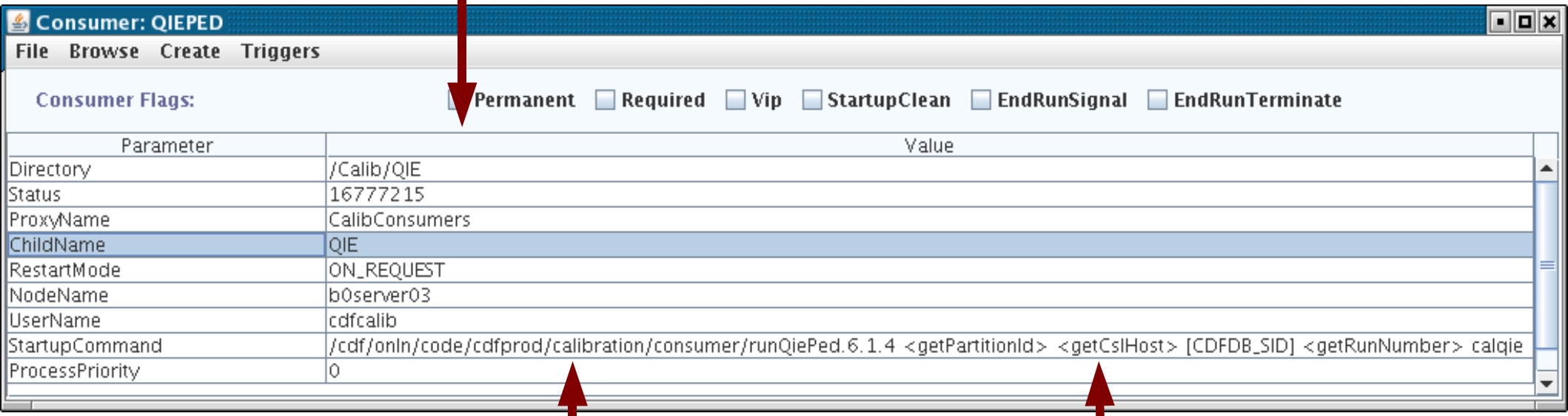
Calibration data flow
NB: Raw data not normally kept



Crate CPUs


Run Type Selector
Configuration Selector
Ace
Calib
Central_Hadron_Laser
CLC
COT
Laser
LED
Muon
QIE
ACE_QIE
ACE_QIE_NOBEAM
ACE_TOF_QIE_NEW
CALIB_CLC_QIE
CALIB_QIE_BSC
CALIB_QIE_FWD
CALIB_QIE_MINIPLUG
ONLY_CENTRAL_QIE
ONLY_WHA_QIE
QIE_TOF_TEST
SMQIECALIB
SRC
TDC
XEF
Cosmic
DaqTest
Private
AAA_CURRENT
Select
Cancel
RunSet: ACE_QIE Owner: RUN_USER
File Browse Create Triggers Inhibits CalibrationJobSet
Global RunSettings
RunType: QIE Calibration
TriggerType: (none)
SvxSet: (none)
CalorCalibSet: (none)
RunConfiguration Details
Crates Consumers Parameters Output Level 1 Level 2 Level 3 CSL Expert
Add or Remove Crates from Partition
Crates
<Chosen
All Choices>
Edit
<< Add <<
>> Remove >>
CLC_00
CLC_01
CLC_02
CMP_00
CMU_00
CMU_01
CMX_00
CMX_01
COT_00
COT_01
COT_02
COT_03
RunSet: ACE_QIE Owner: RUN_USER
File Browse Create Triggers Inhibits CalibrationJobSet
Global RunSettings
RunType: QIE Calibration
TriggerType: (none)
SvxSet: (none)
CalorCalibSet: (none)
RunConfiguration Details
Crates Consumers Parameters Output Level 1 Level 2 Level 3 CSL Expert
Add or Remove Consumers from Partition
QIEPED
Consumers
<Chosen
All Choices>
Edit
<< Add <<
>> Remove >>
BSCQIEPED
CESCALIB
CESCALIB_BB
CESCALIB_INT
CESCALIB_TEST
CLCQIE
NEWTOFTAC
POTQIEPED
QIEPED_DEV
QIEPED_MINIPLUG
SIXPED
SVX_X

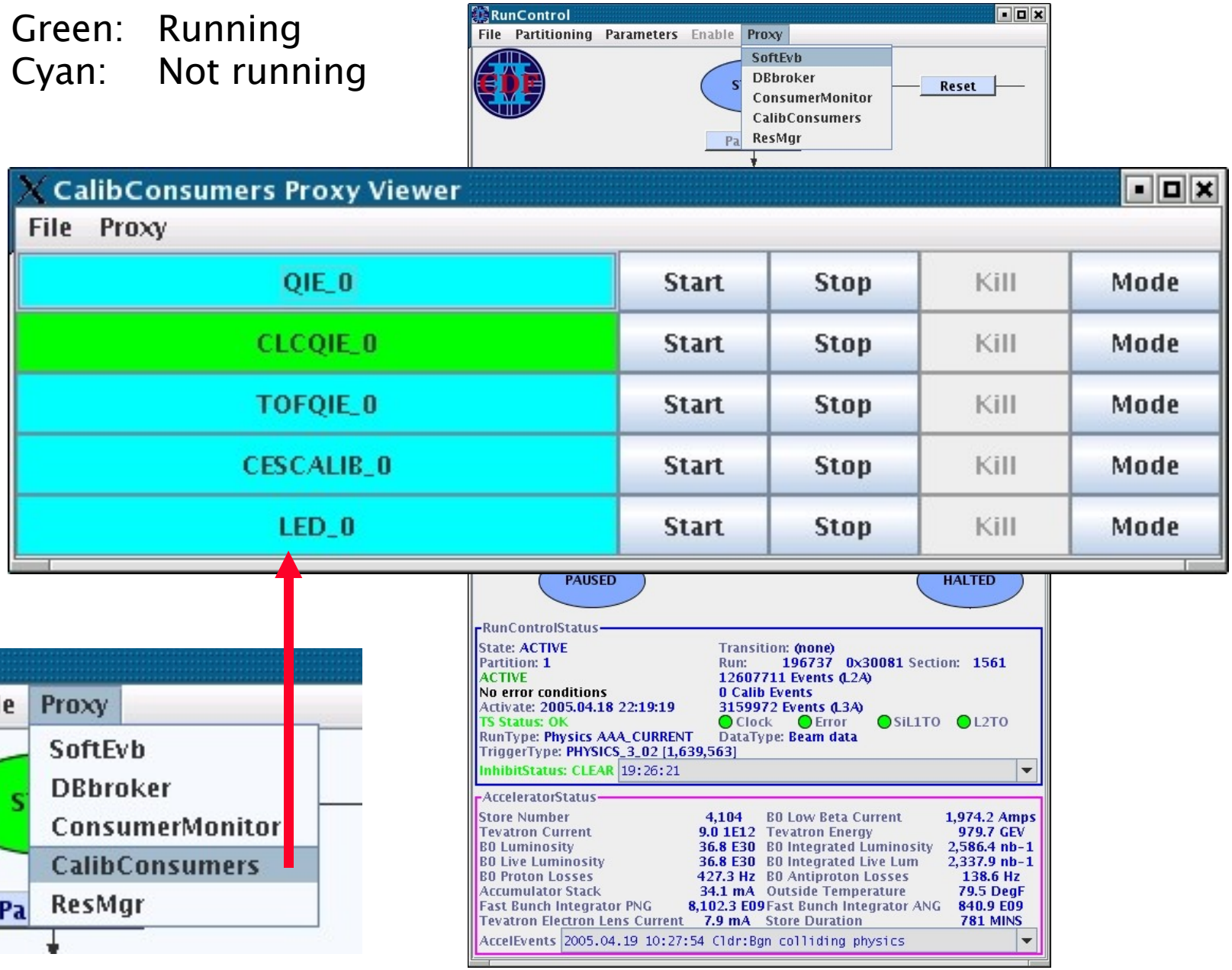




Dynamic script arguments filled at run time

Script that launches the AC++ job
owned by cdfprod account

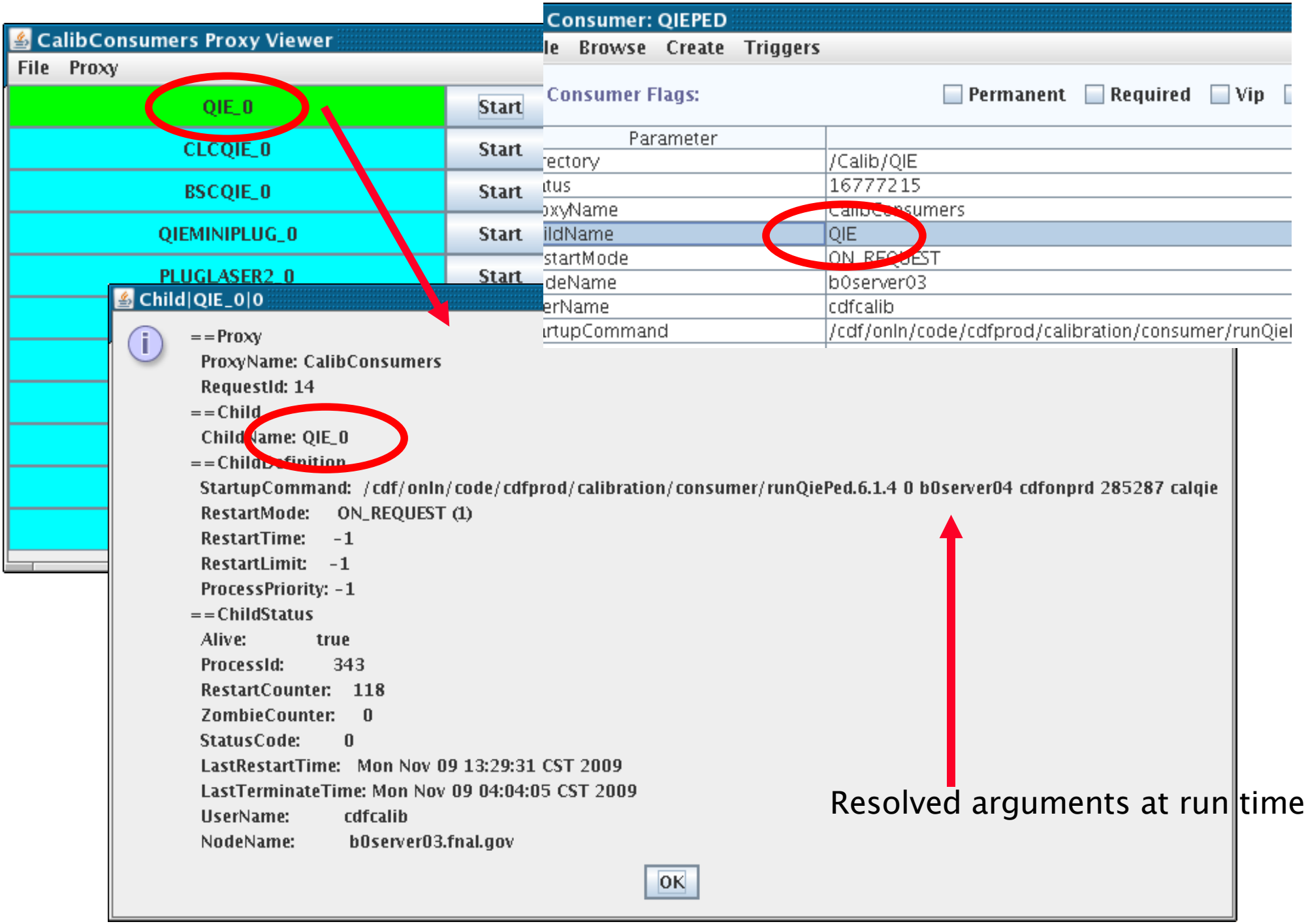
Green: Running
Cyan: Not running



Or from command line:

setup fer

proxyViewer CalibConsumers


CalibConsumers Proxy Viewer
File Proxy
QIE_0 Start
CLCQIE_0 Start
BSCQIE_0 Start
QIEMINIPLUG_0 Start
PLUGLASER2_0 Start
Consumer: QIEPED
le Browse Create Triggers
Consumer Flags:
Permanent
Required
Vip
Parameter
ectory /Calib/QIE
tus 16777215
oxyName CalibConsumers
ildName QIE
startMode ON_REQUEST
deName b0server03
erName cdfcalib
rtupCommand /cdf/onln/code/cdfprod/calibration/consumer/runQiel
Child|QIE_0|0
==Proxy
ProxyName: CalibConsumers
RequestId: 14
==Child
ChildName: QIE_0
==ChildDefinition
StartupCommand: /cdf/onln/code/cdfprod/calibration/consumer/runQiePed.6.1.4 0 b0server04 cdfonprd 285287 calqie
RestartMode: ON_REQUEST (1)
RestartTime: -1
RestartLimit: -1
ProcessPriority: -1
==ChildStatus
Alive: true
ProcessId: 343
RestartCounter: 118
ZombieCounter: 0
StatusCode: 0
LastRestartTime: Mon Nov 09 13:29:31 CST 2009
LastTerminateTime: Mon Nov 09 04:04:05 CST 2009
UserName: cdfcalib
NodeName: b0server03.fnal.gov
OK
Resolved arguments at run time

Common Problems:

- Results do not show up on eLog and calibration web pages
- SoftEVB gets “stuck” during run or at end

Common Solutions:

- Restart SoftEVB via proxy control panel, easy to do, but usually not the problem
- Restart Calibration CSL, most common recent problem
  - Remember that there are *two* CSLs
  - Restart Calibration CSL on **b0server04** under the **cdfdaq** account
- If you still have problems, have a look at the calibration consumer log files:
  - /cdf/onln/cdfdaq/consumers/log
  - Each calibration type and run has unique log file
- Check cdfdaq and cdfcalib account disk quotas (done in ProcMon)